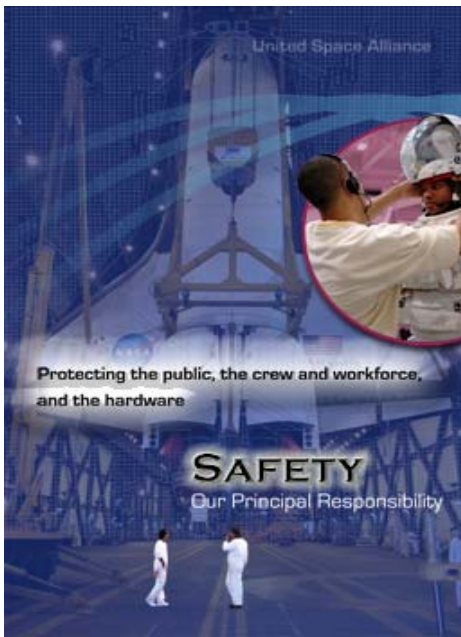


United Space Alliance, LLC

Safety, Quality & Mission Assurance



Achieving 3rd-Party Certification of USA's Environmental Management System (EMS):

LESSONS LEARNED

September 25, 2008

Presented by Gene Harm and David Teixeira

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AGENDA

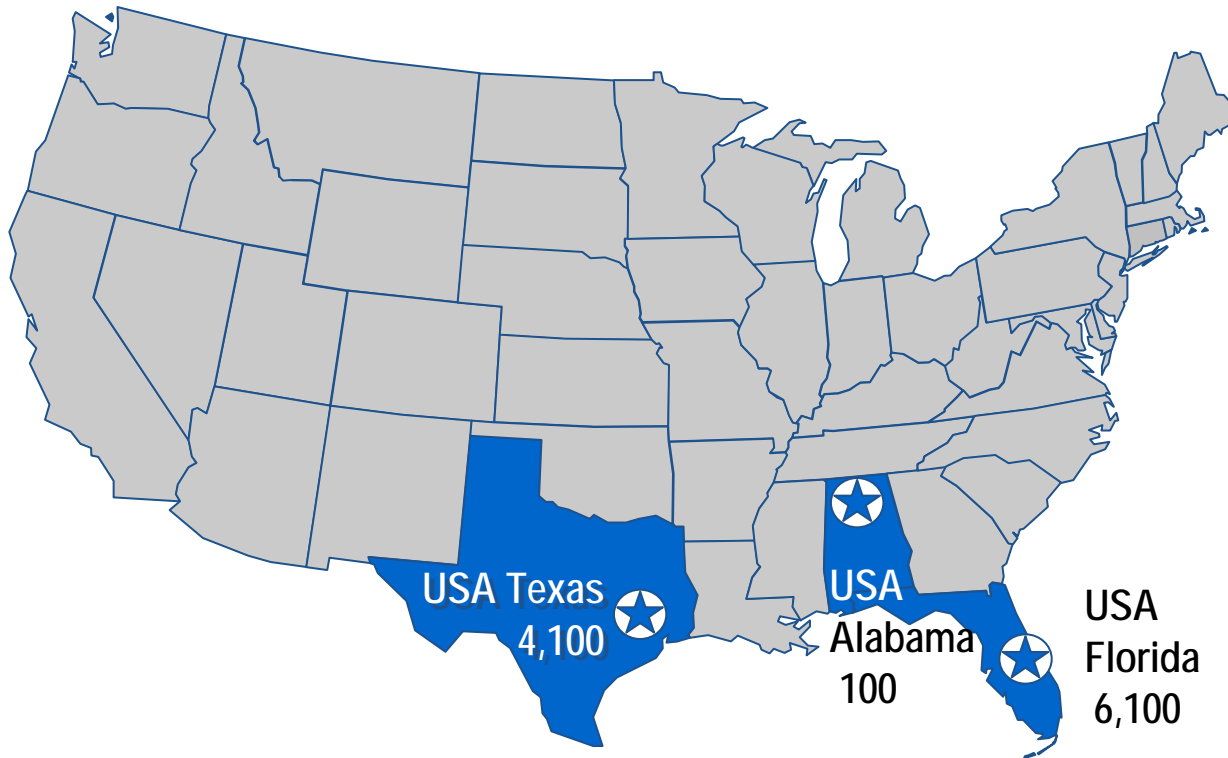
- **USA Overview**
- **Environmental Management System (EMS)
Certification Timeline**
- **Benchmark Data**
- **Lessons Learned**
- **Conclusion**

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INTRODUCTION

USA Locations with 3rd-Party Certification of EMS



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INTRODUCTION

- **USA currently holds the following certifications**
 - ISO 9001:2000
 - AS9100
 - OSHA's VPP (initial site 1997; 8 total STAR Sites since 2002)
 - ISO 14001:2004 (since July 2007)
- **These certifications document USA's integrated Quality, Environmental, Safety and Health programs**
- **Achieving 3rd-party certification of the EMS was not a contractual requirement**

**This presentation features “Lessons Learned”
from achieving 3rd-party certification of USA's
EMS to the ISO 14001:2004 Standard**

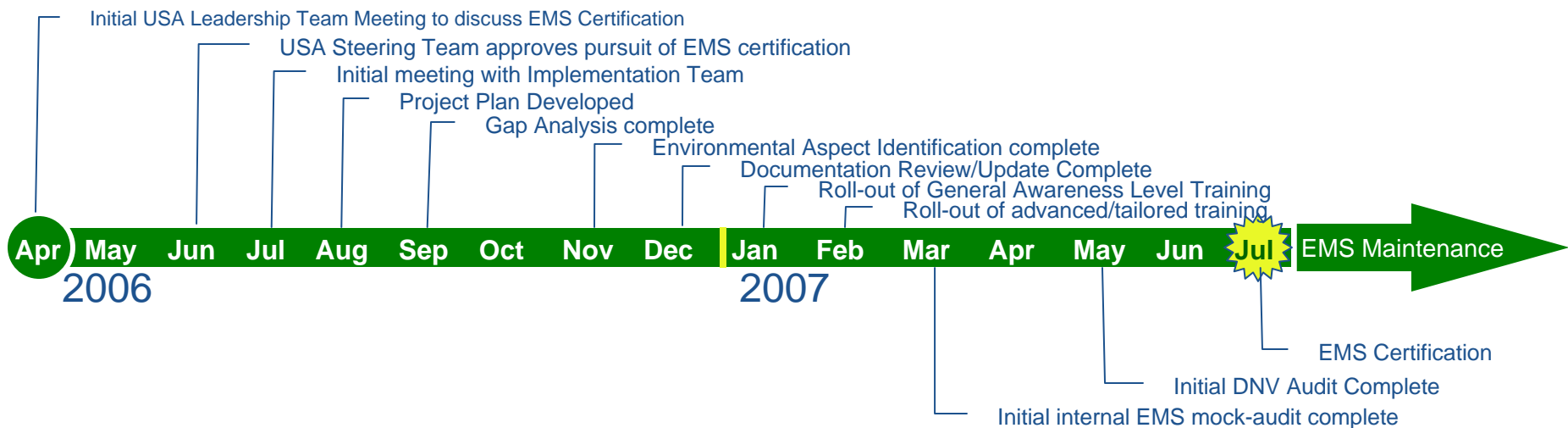
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INTRODUCTION

➤ Timeline – Very Aggressive

- **Critical factor: commitment from the top was essential**
- **Strategic planning was critical early on**

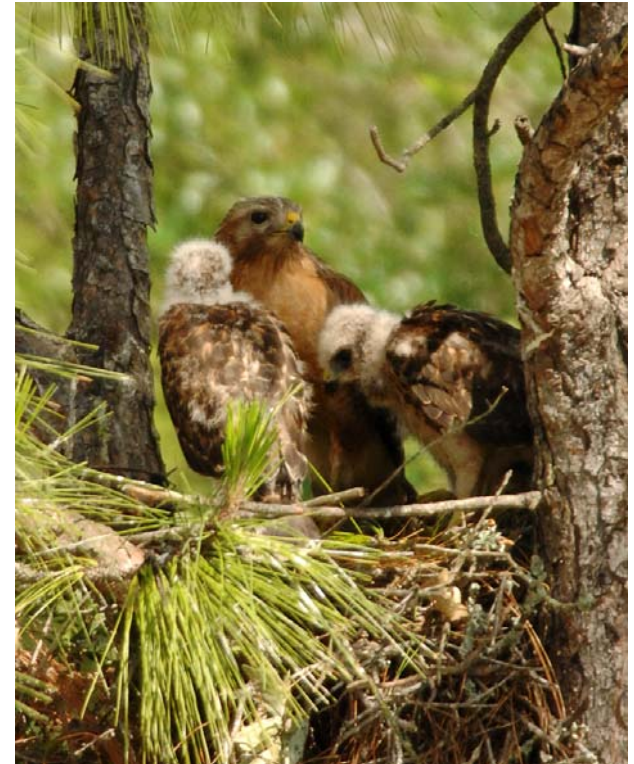


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BENCHMARK DATA

- **First meeting of the USA ISO 14001:2004 Implementation Team was held in July 2006**
- **Within 7 months, all requirements were in place**
- **Initial DNV audit of Texas, Florida and Alabama operations**
- **USA was certified in July 2007**
- **This certification compliments NASA's existing Environmental Management Systems for each of the centers in Texas, Florida and Alabama.**
- **Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management**



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LESSONS LEARNED

- **Gap Analysis – Critical in determining current-state operations vs. the provisions of the Standard**
 - **USA’s approach was to tweak existing documentation and leverage the solid structure framed by our Quality Management System**
 - Streamlined integration and reduced the burden on the general population
 - Created complimentary evaluation/modification/implementation framework
 - Supported by the strong Quality and Safety culture

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LESSONS LEARNED

- **Training – The Implementation Team consisted of 10 individuals with strong backgrounds in Quality, Safety and Environmental Management**
 - Each member received specialized training in the development, implementation and maintenance of an ISO 14001:2004-compliant EMS
 - Select members of the Implementation Team as well as members of USA's Internal Audit Department received EMS Lead Auditor Training
 - ISO Implementation Team developed multiple levels of EMS training for employees, contractors and vendors
 - ISO 14001:2004 General Awareness Level training for all
 - More detailed/tailored training for employees who interact with significant aspects

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LESSONS LEARNED

- **Communication – The implementation efforts required multiple levels of communication**
 - Communication with the NASA customer and other stakeholders
 - Communication with employees, vendors, subcontractors
 - Every possible communication medium was utilized to ensure success (VSP, E-Mail, posters, webtops, training, information cards, newsletters, etc.)



The **USA Communicator**



USA Intranet Home

**USA Managers
WebTop**

HOME

Opportunities for improved environmental performance of space and earth are provided in the USA E-Press program.

http://www.nasa.gov/pdf/usa/usa_e_press_program.htm

An Environmental Impact Statement (EIS) is required for all major federal actions that significantly affect the environment.

A complete list of USA's environmental records is available at:

http://www.nasa.gov/pdf/usa/usa_eis_records.htm

Environmental Responsibility

As a USA employee, subcontractor or service provider, you are responsible for the potential to impact the environment.

It is your responsibility to recognize and minimize these impacts by following existing operating procedures and/or other control documents.

USA Environmental Management System (EMS) ISO 14001

USA's Quality, Safety & Health and Environmental Policy Statement

Products and Services for Space Transportation, Earth, Sea, Air and Underwater

The "Goal" of the USA E-Press program is to provide protection of the environment. USA's corporate policy is defined in USA-20.

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LESSONS LEARNED

- **Environmental Aspect Identification & Ranking**
 - **Critical to establish rules up front to ensure complete identification and consistent evaluation for ranking**
 - **Establish clear definitions of in-scope vs. out-of-scope**
 - **Challenge: USA included on-Site operations “controlled” by USA activities, but excluded operations which are out of USA’s “control or influence”**
 - **Following extensive consideration by the Implementation Team and USA’s Executive Leadership, the decision was made to not publish the list of environmental aspects externally**

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LESSONS LEARNED

➤ Continual Improvement

- To support the requirement for continual improvement, USA considered numerous initiatives
- Company-wide:
 - Implemented a rigorous Internal Audit schedule
 - Implemented a comprehensive Environmental Management System Self Assessment (EMSSA) process
 - Integrated the existing Corrective Action and Preventive Action (CA/PA) process to address non-conformances from external DNV Audit findings, USA Internal Audit findings, and EMSSA findings
 - Challenge in determining severity and assigning it to the appropriate “office of prime responsibility”
 - Required consensus from Management Team

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LESSONS LEARNED

➤ Continual Improvement (continued)

– The Audit Process

- Selecting a 3rd-party registrar who is qualified and capable of auditing Quality and Environmental programs
- One challenge was to ensure USA's Internal Audit Department had auditors qualified to concurrently assess multiple programs
- During both DNV Audits and USA's Internal Audit process, it was difficult to separate Quality, Environmental and Safety provisions
 - » Example is building evacuation map finding by DNV



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LESSONS LEARNED

- **Continual Improvement (continued)**
 - **Company-wide:**
 - **Flow-down of environmental-related goals through USA's existing Vision Support Plan**
 - Ensures an appropriate level of participation for all organizations
 - **Leverage “noteworthy” efforts...broadcast details and/or develop training programs which feature noteworthy practices/processes to share with other elements with similar operations**

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LESSONS LEARNED

➤ Continual Improvement (continued)

– Company-wide:

- **Environmental Suggestion Box** – a tool established to encourage employee involvement and to spawn new ideas for environmental-related initiatives



- **Taking Charge of the Environment (TCOTE)** – modeled after USA's highly successful **Taking Charge of Safety (TCOS)** Award

- Recognizes individuals/groups with the **Environmental Stewardship Award** for going above-and-beyond in support of environmental-related goals both internal and external to USA



Environmental Suggestion Box

No.	Submitted	Location	Status	Category	POC
52	Kessinger Leslie J on Nov 27, 2007 Dept: 0160150	Texas	Under Review	Energy/Resource Conservation	Metcalf Michael A
Suggestion: 1) Turning off lights in offices when leaving for a meeting or lunch. Do a pilot test of a building to see if how well employees work at this. Put "Gold Stars" on the office of those who offices are... Comments/Notes from Environmental Suggestion Box: USA's Facilities Department contracted with an independent firm to complete a comprehensive Energy Conservation Study at the end of 2006. Currently, the Facilities Department is evaluating all recommendations based on cost, benefit (financial and environmental) and other criteria. ES&H-Texas recognizes another aspect of an overall energy conservation effort includes general awareness and education of the workforce. We will continue to use the Environmental Blitz website, the Tuesday USA Communication email, postings on the employee/manager websites and other media to educate all USA employees. If you have any specific ideas, please contact the POC, Mike Metcalf.					
53	Kessinger Leslie J on Nov 27, 2007 Dept: 0160150	Texas	Under Review	Energy/Resource Conservation	
Suggestion: Turning off lights in Conference Rooms when meetings are completed, or Conference Room is not in use					
56	Giordano Glenn A on Nov 27, 2007 Dept: 0356520	Florida	Under Review	Energy/Resource Conservation	Venuto Charles J
Suggestion:					

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LESSONS LEARNED

- Promotion of environmental-related volunteer opportunities



Any Questions?

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